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EXAMINER

MARCANTONI, PAUL D

ART UNIT	PAPER NUMBER
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1755

DATE MAILED: 06/08/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/070,218

Applicant(s)

GOODWIN ET AL

Examiner

Paul Marcantoni

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12-22 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

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Applicant's election without traverse of Group II, claims 12-22 in the reply filed on 9/23/04 is acknowledged.

Claims 12-22 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-11 of U.S. Patent Publication 2005/0045067 A1 (10/960,150-Naji et al.). Although the conflicting claims are not identical, they are not patentably distinct from each other because Naji et al. teach a composition comprising cement, plasticizer such as melamine sulphonate formaldehyde (page 2 [0033]), cellulose (p.3), and gums [0039] in amounts overlapping the instantly claimed invention.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12 and 14-22 are rejected under 35 U.S.C. 103(a) as obvious over,

Westof et al. '228

Westhof et al. '228 teach a composition comprising Portland cement, plasticizer (dispersant), hydroxypropoxymethylcellulose (viscosity enhancing agent), sand (density modifier), polyethylene reinforcing fiber, and water (See col.4, lines 39-57). Westhof does not teach his cement is extrudable. However, one of ordinary skill in the art would have understood that cement compositions may be extruded and this is done so conventionally. Westhof et al. do not teach an amount of viscosity enhancing agent

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such as cellulose in the amounts of the instantly claimed invention of .05 to 0.5 wt% but does teach an amount of 0.02 wt%. Thus, it does not meet the limitation of claim 13. Westhof et al. '228 also teach the addition of an aluminum silicate calcined china clay and thus meets the limitations of claim 20. It also would have been an obvious design choice for one of ordinary skill in the art to select a particular type of cellulose as a viscosity enhancer because cellulose is known for this purpose and the various types of cellulose are functionally equivalent as viscosity enhancers. This can also be seen as true since applicants in claim 19 indicate many different cellulose ethers that meet the definition of viscosity enhancing agent and are functionally equivalent.

Claims 12-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **De Buen-Unna et al. '077 B2 or '605 B2**

The Buena Unna patents teach cement and an additive comprising methylcellulose (see, for example '605 B2 teaching viscosity enhancing agent-claim 1 in col.6), dispersing agent (see '605 B2, for example, melamine formaldehyde polymer-see claim 7 in col.8). Note that the amounts are broken down into cement and additive and when the additive amounts are taken as a whole with respect to the overall composition the amounts of viscosity enhancer and dispersing agent overlap the instantly claimed invention. Overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art. Again, one of ordinary skill in the art would have understood that cement compositions may be extruded and this is done so conventionally.

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Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Burgand '394**.

Burgand '394 teaches a composition comprising cement, melamine formaldehyde dispersant, and a combination of gum and cellulose in amounts that overlap the instant invention. Upon conversion of the amounts of components into weight percent, they would appear to overlap the instantly claimed invention. Overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **GB 1265471 (Pilgrim)**.

GB '471 teaches an extrudable gypsum composition comprising gypsum, dispersant such as melamine formaldehyde (col.2, page 1, line 85-86), bentonite clay (see applicants' claim 20), and water. GB '471 does not explicitly teach "cementitious material" yet one of ordinary skill in the art ^{would} ~~would~~ have understood that gypsum plaster is a cementitious material. GB '471 teach that modifying agents such as cellulose ethers may be added in effective and sufficient amounts (page 2, col.1, lines 44-46) and that it is old to add fiber and sand (density modifier-see page 2, col.1, lines 40-44). Again, upon conversion from parts by weight, it would appear that the amounts overlap the applicants' instantly claimed invention and overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 12-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fukuba et al. '697.

Fukuba et al. '697 teaches a gypsum plaster (one of ordinary skill in the art would have understood it to be cementitious), sulfonic dispersing agent such as melamine formaldehyde condensation product (see claim 8 in col.10), and a filler such as sand, fly ash, or slag which also can be construed as a density modifying agent as claimed by applicants in claim 1. Again, upon conversion from parts by weight, it would appear that the amounts overlap the applicants' instantly claimed invention and overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **McCurich et al. '480**.

McCurich et al. '480 teach a pumpable cement composition. Note that it is understood by one of ordinary skill in the art that cement compositions can be extrudable and since this composition, is also pumpable, its own viscosity could also allow it to be extruded. McCurich et al. '480 teach a composition comprising Portland cement, sand (density modifier) sulphonated melamine formaldehyde condensate dispersant, lignosulfonate plasticizer which is also a dispersant, and water (see Examples 1 and 2 in col.2). McCurich et al. further teach the addition of expanded clay in col.1, line 65. It is the examiner's position that upon the addition of both dispersants (plasticizer and sulfoated melamine formaldehyde condensate) and conversion to

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weight percent, the amounts of components overlap the instantly claimed invention and overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 12-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Shin et al. (KR 9508587-see abstract only)**.

Shin et al. (KR 9508587-see abstract only) teaches a mortar comprising cement, cellulose ether thickener (viscosity enhancing agent) in amounts of 0.5 to 2.5 wt% (thus overlapping applicants upper limit of 0.5 for viscosity enhancing agent in claim 13), and 0.6 to 5.0 wt% plasticizer (dispersant). Although the applicants teach an upper limit of 0.5, it is the examiner's position that the addition of this minute amount of extra dispersant would not teach away from the instant invention. The specification provides no statements that adding more dispersant would materially affect their claimed extrudable cement composition. It would appear that the use of slightly more dispersant would not affect the applicants' invention either as it still performs the same function by adding slightly more plasticizer (0.6 wt% versus 0.5 wt% applicants upper limit of dispersant) and only leads to increased economic costs. The applicants even mention this with respect to the viscosity enhancing agent and it would appear the same would be true with respect to the dispersing agent (see p.5 of specification, applicants mention cost of viscosity enhancing agents-middle paragraph). It also would have been an obvious design choice to select a particular cellulose ether because they are all functionally equivalent as thickeners or viscosity enhancers. Shin also do not teach specifically sulfonated melamine formaldehyde but does teach melamine sulfonic acid

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which is either the same or functionally equivalent as a dispersant and the use of either known and conventional dispersant would have been an obvious design choice for one of ordinary skill in the art.

Claims 12-19 and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Schermann et al. '383**.

Schermann et al. '383 teaches a thickener combination comprising hydroxycellulose ethers (col.6, lines 15-20) and anionic surfactants such as naphthalenesulfonic acid polycondensation product (col.5, last paragraph) in amounts that would appear to overlap the instantly claimed invention (see col.6, lines 40-43). It would have been an obvious design choice for one of ordinary skill in the art to use a particular cellulose ether because they are functionally equivalent and known as thickeners or viscosity enhancers. It is the examiner's position that it also would have been an obvious design choice for one of ordinary skill in the art to use a known and old dispersant such as naphthalenesulfonic acid polycondensation product or sulfonated melamine formaldehyde because both are functionally equivalent as dispersing agents. Scherman et al. do not teach his composition is extrudable but one of ordinary skill in the art would have understood that cement compositions are known as extrudable compositions.

Claims 12-19 and 20-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Dingsoyr '060**.

Dingsoyr do not teach an extrudable composition yet it is known in the art that cement compositions are extrudable. Dingsoyr teach a composition comprising 0-12 wt% thinner (dispersant) such as sulfonated melamine formaldehyde (claim 14 in col.8), silica sand filler (density modifier), and 0.1 to 4 wt% of a fluid loss agent such as carboxymethylcellulose (see col.4, lines 10-15) which are in amounts overlapping the instant invention. Overlapping ranges of amounts would have been prima facie obvious to one of ordinary skill in the art.

Claims 12-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Debus et al. '674**.

Debus et al. '674 teach an additive for cement, concrete, or mortar (all cementitious) comprising, cellulose ethers such as hydroxyethylcellulose in amounts of 0.005 to 0.5 wt% (see col.4, lines 35-57) Debus also teach that 0.5 to 20 wt% surface active agents (surfactants which are dispersants) which meets the limitations of applicants claim 13 because they do not specifically identify the identity of the dispersant in this claim. It is also noted that because the surfactant is met for this claim, the other claims do not require amounts but only the presence of the component such as a plasticizer or dispersant like melamine formaldehyde or naphthalene formaldehyde (col.3, lines 5-10). Debus also teach the presence of polyacrylamides and polyvinyl alcohol which can also make up the composition (col.3 last paragraph) for concrete and

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are known additives and thus meet the limitations of claim 20. It is the examiner's position that cements are known as extrudable compositions and since this composition is pumpable it would follow that it could potentially be extrudable as well.

Claims 12, 14-19, and 21-22 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Cheriton et al. '175**

Cheriton et al. '175 teach a composition comprising cement superplasticizer dispersant such as melamine formaldehyde condensate (col.1, lines 55-57), sand (density modifier-col.2, line 5), Cheriton et al. do not teach overlapping ranges of amounts of components as in applicants' claim 13 nor do they teach the viscosity enhancing agent of claim 20 Cheriton et al. do teach a cement composition with the same components as the claims listed above, however (see also col.3, Examples 1 and 2) . Cheriton do not teach his composition is extrudable but one of ordinary skill in the art would have understood that cements can be extrudable.

Cumulative Art Cited as Relevant :

Burge et al. '123, Colombet (2005/0005821 A1), Sobolev et al. '289 B2, Downing et al. '840, WO 8600-291 (abstract cited by applicants), Cheriton et al. '175, JP 62036055 (Tanaka et al.), GB 2230772 (Hughes et al.-abstract only), Choi (KR 2001053808). Babka et al. (WO 2001051427), Shen et al. (TW 408089), Martin (AUSTRALIA 572111), Skaggs et al., or JP 06-127992 (Yamato et al.) also could have been used in a rejection of claims but the above cited references were sufficient to meet the limitations of claims 12-22. The applicants may consider review (and comment if necessary) of these references as well (though not rejected) to ascertain they also do not meet any newly added amendments such as ranges of amounts, components present, etc. when they may make a response to this rejection or previous claims.

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Claims 12-22 are rejected under 35 U.S.C. 112, second paragraph, as failing to set forth the subject matter which applicant(s) regard as their invention.

Claim 12 is indefinite because it says that water is optional yet water is mandatory to the composition for it to even be cementitious or hydraulic and have settable properties. A dry mix will not set.

It is also indefinite because it is not clear if only lime is an optional component or silica is optional as is density modifier, reinforcing fiber and water. If all are optional (it is assumed water is not optional), applicants may consider amending the claim using Markush language such as ---optional ingredients selected from the group consisting of lime, silica, density modifiers, and reinforcing fibers and mixtures thereof). Please only consider using this suggestion if there is original support for this as well.

Claim 12 is vague with respect to "density modifier". Other components added such as silica and lime can also modify density by their presence and thus it is not distinguished from density modifiers.

The term "acrylic "based" polymers" are indefinite. Is it derived from acrylic or acrylic containing in claim 20.

The term "type" in claim 21 is indefinite. Applicants may consider removing this term.

Cited of Interest:

Sprouts et al. (US Pat Pub 2004/0211342 A1-same as 10/423,386) has been cited of interest as relevant art because it teaches the different types of dispersants

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Paul Marcantoni whose telephone number is 571-272-1373. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Paul Marcantoni
Primary Examiner
Art Unit 1755